

Proposed Strategy using Representative Examples
CALFED Bay-Delta Program Programmatic Habitat Conservation Plan

Geographic Region	Habitat Type/ Ecological Zone	Species/Life Stage Affected	Conservation and Restoration	Programmatic Actions	Effect of Actions on Species (Level of Take)	Mitigation Strategies	Assurances
<p>This column defines a broad geographic region which would be affected by the CALFED program.</p>	<p>Three basic habitat types are displayed in this column. These habitat types are used as a way to generally group species for organizational purposes. All potential habitat types within the Program area would fall within these three groups. It is recognized that these groups are just for organizational purposes, that habitats are often not distinct but blend together, and that species move between habitat types.</p> <p>The three habitat types are:</p> <p>Terrestrial Habitats including Riparian, In-channel islands, Upland, and dry or irrigated (but not flooded) agricultural lands.</p> <p>Wetland Habitats, including freshwater, tidal and brackish marsh and vernal pools and flooded agriculture.</p> <p>Aquatic habitats</p>	<p>This column is used to display a comprehensive list of protected species and life stages which could be affected within the geographic region. Species are grouped in accordance with their primary habitat type (terrestrial, wetland or aquatic).</p> <p>Species are identified and organized by their State and Federal listing status. The categories for listing status include:</p> <p><u>Listed Species</u> <u>Species Proposed for Listing</u> <u>Candidate Species</u> <u>Species of Special Concern</u></p>	<p>This column is used to display conservation, restoration and preservation actions being undertaken by the CALFED Program.</p> <p>An action is placed in this column only if it provides a benefit to the associated species and habitat types within the specific geographic area.</p> <p>Many of these actions are contained within the ecosystem restoration program, but also include:</p> <p>Levee system integrity actions which enhance aquatic, terrestrial and wetland habitat;</p> <p>Water quality actions which decrease contaminants within aquatic, terrestrial, and wetland habitats; and</p> <p>Storage and conveyance actions which improve flow patterns, water quality or provide additional habitat.</p> <p>It is recognized that conservation and restoration actions may also have adverse effects for other species. These adverse effects are identified in the Programmatic Actions column.</p>	<p>The Programmatic Action column is a comprehensive list of all of the programmatic actions being proposed within the specified geographic area as part of the CALFED Program which could have a potential adverse affect on any of the identified species.</p> <p>Actions which cross geographic boundaries would appear in the matrix for each geographic region, but would be identified to allow mitigation to be equitable within each region.</p> <p>This list would also include conservation and restoration actions which while providing benefits to some species could adversely affect others.</p>	<p>This column will identify potential effects to individual species and the projected level of take for each species.</p>	<p>Mitigation strategies are intended to offset adverse affects to protected species which occur as a result of a specific programmatic action.</p>	<p>Assurances will be sought at varying levels of specificity. Higher or more specific levels of assurance will be sought in areas where there is a high level of information such as the Delta.</p> <p>More general levels of assurance are likely to be appropriate in areas further away from the Delta where less information may be available.</p> <p>The combination of conservation and restoration actions and mitigation strategies for a species or group of species within a general habitat type for a specific geographic region will be intended to provide a level of protection which is equitable to the level of assurance.</p> <p>Assurances will only apply to species and actions which are specifically discussed within this document.</p>

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Legal Delta	Aquatic habitats including operational and flow related actions outside of the Delta, from existing or future project features, which could potentially influence Delta hydrodynamics and flow.	<p><u>Listed Species including:</u></p> <ul style="list-style-type: none"> ❖ Chinook Salmon (FE, SE) ❖ Delta Smelt (FT) <p><u>Species Proposed for Listing including:</u></p> <ul style="list-style-type: none"> ❖ Sacramento Splittail (PFT) <p><u>Candidate Species including:</u></p> <p><u>Species of Special Concern including:</u></p> <ul style="list-style-type: none"> ❖ Longfin Smelt 	<p>❖ Allow a 20-40,000 cfs flow event in March, April or May; allow passage to the Bay of the first fall flow event; and provide 13,000 cfs Sacramento river inflow in May to restore the basic features of the hydro graph in order to reactivate and maintain ecological processes and functions.</p> <p>❖ Reestablish more natural internal Delta hydraulics in channels not designated to carry cross-Delta flow of water to south Delta pumping plants.</p> <p>❖ Maintain net downstream flows in the mainstem San Joaquin River from Vernalis to immediately wet of Stockton from Sept. through Nov.</p> <p>❖ More frequently achieve mean daily water temperatures between 60 and 65 degrees F in Delta channels in spring and fall consistent with temperature needs for salmon and steelhead migrating through or rearing in the Delta.</p>	<p>Diversion of high flows which do not interfere with maintenance of natural stream functions to off stream storage facilities north of the Delta or within the Delta.</p> <p>Construct or stabilize waterside levee slopes, low water berms, or in-channel islands.</p>		<p>Diversion facilities will be sited and screened to avoid and reduce losses from diversions.</p> <p>Diversion will be timed to avoid interrupting natural stream processes and adverse impacts to fish.</p> <p>A designated portion of new off stream storage will be used to provide restoration flow s.</p>	<p>So long as the permittees are in good faith implementing the terms of this HCP; FWS, NMFS, DOI, and DOC will not require the commitment of additional land or financial compensation beyond the level of conservation, restoration or mitigation which has been described and provided under the terms of this HCP.</p> <p>If additional mitigation measures are subsequently deemed necessary to provide for the conservation or a species that is covered under the terms of this HCP, the obligation for such measures shall not rest with the permittee.</p>
	Terrestrial Habitats including Riparian, In-channel islands, Upland, and dry or irrigated (but not flooded) agricultural lands.	<p><u>Listed Species including:</u></p> <ul style="list-style-type: none"> ❖ Swainson's hawk (ST) <p><u>Species Proposed for Listing</u></p> <p><u>Candidate Species</u></p> <p><u>Species of Special Concern</u></p>	<p>Manage 40,000-75,000 acres of agricultural lands to improve wildlife habitat values.</p> <p>Restore 25-45 linear miles of riparian and SRA habitat in the Delta. Protect existing riparian woodlands in the Delta. Maintain existing channel islands and restore 200-800 acres of high value islands in selected sloughs and channel.</p> <p>Restore 1,000-6,000 acres of perennial grassland.</p>	<p>Construct stormwater detention basins within the Delta as a source control action to control contaminant loading levels.</p>		<p>All project areas within known nesting areas will be surveyed prior to construction during the nesting season. Where active nests are found construction will be deferred until nesting efforts are complete.</p>	<p>These assurances do not extend to species which have not specifically been discussed within this HCP.</p>
	Wetland Habitats, including freshwater, tidal and brackish marsh and vernal pools	<p><u>Listed Species including:</u></p> <p><u>Species Proposed for Listing</u></p> <p><u>Candidate Species</u></p> <p><u>Species of Special Concern</u></p>					

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Central Valley, between Sacramento and Red Bluff	Terrestrial Habitats including Riparian, upland areas and agricultural lands	<u>Listed Species including:</u> ♦Swainson's hawk (breeding nesting, rearing) (ST) ♦Western yellow billed cuckoo (breeding nesting, rearing) (SE) ♦Bank swallow (breeding nesting, rearing) (ST) ♦Valley elderberry longhorn beetle (FT) <u>Species Proposed for listing:</u> <u>Candidate Species</u> <u>Species of Special Concern:</u>	♦Establishment of a meander corridor along the Sacramento River between Princeton and Red Bluff preserving 8-12,000 acres of riparian land. ♦Setting back levees and restoring riparian habitat between Colusa and Princeton	Preserve 12,000 acres of riparian lands in meander belt. Set back levees and restore riparian habitat between Colusa and Princeton. Construct a diversion channel or pipeline with a capacity between 5,000-15,000 cfs from the point of diversion to existing diversion facilities or an off stream storage facility.		All project areas within known nesting areas will be surveyed prior to construction during the nesting season. Where active nests are found, construction will be deferred until nesting efforts are complete.	If the mitigation strategies and conservation and restoration actions are implemented for the species, habitat type and geographic area, no additional mitigation, conservation or restoration will be required. This assurance does not extend to species which have not specifically been discussed.
	Wetland habitats, including freshwater marsh and vernal pools	<u>Listed Species including:</u> ♦Giant garter snake (FT,ST) ♦Vernal pool species including Fairy shrimp and protected plant species ♦California Red Legged Frog (FE) <u>Species Proposed for listing:</u> <u>Candidate Species</u> ♦California tiger salamander (FC) <u>Species of Special Concern:</u> ♦Western pond turtle ♦Western spadefoot toad					
	Aquatic habitats	<u>Listed Species including:</u> ♦Chinook Salmon (FE,SE) <u>Species Proposed for listing:</u> <u>Candidate Species</u> <u>Species of Special Concern:</u> ♦White and Green Sturgeon					